

CLAIMS

We claim:

1. System adapted for use with a structure for drilling in a floor of an ocean using a rotatable tubular and drilling fluid when the structure is floating at a surface of the ocean, the system comprising:

a riser fixed relative to the floor of the ocean, said riser having a top, bottom and an internal diameter;

a housing disposed above a portion of said riser, said housing having a first housing opening to discharge the drilling fluid received from said riser;

an assembly having an inner member, said inner member rotatable relative to said housing and having a passage through which the rotatable tubular may extend;

a seal moving with said inner member to sealably engage the tubular;

a quick disconnect member to disconnect said assembly from said housing;

and

the floating structure movable independent of said assembly when the tubular is rotating.

2. System of claim 1 wherein said housing permits substantially full bore access to said riser.

3. System of claim 1 wherein structure has a deck above the surface of the ocean, said housing when disposed on said riser positioned above the surface of the ocean and below said deck.

4. System of claim 1 further comprising a conduit for communicating drilling fluid from said first housing opening to said structure.

5. System of claim 1 wherein said quick disconnect member is a clamp.

6. System of claim 1 further comprising a choke to control pressure in said riser and the seal.

7. System of claim 1 further comprising a second housing opening in said housing and a rupture disk in fluid communication with the second housing opening.

8. System of claim 1 wherein said seal is a stripper rubber.

9. System adapted for use with a structure for drilling in a floor of an ocean using a rotatable tubular and drilling fluid when the structure is floating at a surface of the ocean, the system comprising:

a riser having a top, bottom and an internal diameter;

a housing disposed above a portion of said riser, said housing having a first housing opening to discharge the drilling fluid received from said riser;

an assembly having an inner member, said inner member rotatable relative to said housing and having a passage through which the rotatable tubular may extend;

a seal moving with said inner member to sealably engage the tubular; and

a flexible conduit for communicating the drilling fluid from said first housing opening to the structure whereby the structure is movable independent of said housing when the tubular is rotating.

10. System of claim 9 wherein said conduit has a first end and a second end, said first end connected to said first housing opening and said second end connected to a device for receiving the drilling fluid.

11. System of claim 10 further comprising pressure in said riser wherein said device controls the pressure in the riser.

12. System of claim 9 wherein said seal is a stripper rubber.

13. System of claim 9 wherein the drilling fluid is maintained at a predetermined pressure whereby the drilling fluid from the riser flows to the structure above the surface of the ocean to a device for receiving the drilling fluid.

14. Method for sealing a riser while drilling in a floor of an ocean from a structure floating at a surface of the ocean using a rotatable tubular and pressurized drilling fluid, comprising the steps of:

positioning a housing above a portion of said riser;
allowing the housing to move independent of said floating structure;
communicating the pressurized drilling fluid from the housing to the structure,
and
compensating for relative movement of the structure and the housing during
the step of communicating.

15. Method of claim 14 further comprising the step of:

attaching a flexible conduit between an opening of the housing and the
floating structure for the step of compensating for relative movement of the structure
and the housing.

16. Method of claim 14 further comprising the step of:

removing an assembly from the housing whereby the housing internal
diameter is substantially the same as the riser internal diameter.

17. Method of claim 14 further comprising the step of:

lowering the housing through a deck of the structure during the step of
positioning a housing above a portion of said riser.

18. Method for communicating drilling fluid from a casing fixed relative to an
ocean floor to a structure floating at a surface of the ocean while rotating within the casing a
tubular, comprising the steps of:

positioning a housing on a first level of the floating structure;
allowing the housing to move independent of said floating structure; and
moving the drilling fluid from the tubular up the casing to a second level of
the floating structure above the housing.

19. Method of claim 18 further comprising the step of:

compensating for relative movement of the structure and the housing during
the step of moving.

20. Method of claim 18 further comprising the step of:
pressurizing the drilling fluid to a predetermined pressure as the drilling fluid flows into the tubular.